AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.   (original): Method of signal processing for a spread spectrum digital radio communication receiver, comprising the following steps:

calculation of an estimate of at least one symbol transmitted by sending means by applying to a radio signal received a processing taking into account at least one propagation path from the sending means;

evaluation of a parameter of reliability of the calculated estimate; and

when the reliability parameter evaluated does not satisfy a confidence criterion, calculation of a refined estimate of the symbol by taking into account at least one additional propagation path from the sending means in the processing applied to the radio signal received.

2.   (original): Method according to claim 1, in which the steps of evaluating the reliability. parameter and of calculating a refined estimate are repeated for as long as the evaluated reliability parameter does not satisfy the confidence criterion and for as long as at least one path out of a maximum number of propagation paths from the sending means has not yet been taken into account in a new estimate of the symbol.

3.   (original): Method according to claim 1, in which, prior to the said processing applied to the radio signal received, a probing is performed that identifies, on the basis of an

analysis of an impulse response of a propagation channel between the sending means and the

receiver, respective delays and energies of reception for the said propagation paths.

4.   (original): Method according to claim 3, in which the propagation paths are

ranked according to a descending order of their respective reception energies and in which the

additional propagation path taken into account in the calculation of the refined estimate of the

symbol is the propagation path which, according to the said ranking, immediately follows the

propagation paths taken into account in the calculation of the previous estimate.

5.   (original): Method according to claim 1, in which the radio signal is a binary

modulation signal, and the parameter of reliability of the calculated estimate of a symbol is

proportional to the absolute value of the said estimate.

6.   (original): Method according to claim 1, in which the radio signal is a quaternary

modulation signal, and the parameter of reliability of the calculated estimate of a symbol is

proportional to the smallest of the absolute values of the real and imaginary parts of the said

estimate.

7.   (original): Method according to claim 1, in which the confidence criterion

consists in the parameter of reliability of the calculated estimate exceeding a threshold.

8.   (original): Method according to claim 7, in which the said threshold depends on a

service life allocated to a communication to which the radio signal received pertains.

9.   (original): Method according to claim 7, in which the said threshold depends on a

noise level estimated over a propagation channel between the sending means and the receiver.

10.   (original): Method according to claim 1, in which the refined estimate of the

symbol is calculated by adding an estimated contribution of the said additional propagation path

to the estimate previously calculated for the symbol.

11.   (original): Method according to claim 1, in which the propagation paths taken

into account in the calculations of estimates include paths originating from several senders

belonging to the said sending means, which send radio signal components that carry identical

information symbols and that are multiplexed with different spreading codes.

12.   (original): Spread spectrum digital radio communication receiver, comprising the

following signal processing means

        means for calculating an estimate of at least one symbol transmitted by sending means by

applying to a radio signal received a processing taking into account at least one propagation path

from the sending means;

        means for evaluating a parameter of reliability of the calculated estimate; and

        means for, when the reliability parameter 25 evaluated does not satisfy a confidence

criterion, calculating a refined estimate of the symbol by taking into account at least one

additional propagation path from the sending means in the processing means applied to the radio

signal received.

13.   (original): Spread spectrum digital radio communication receiver according to claim 12, in which the means for evaluating the reliability parameter and the means for calculating a refined estimate are carried out repeatedly for as long as the evaluated reliability parameter does not satisfy the confidence criterion and for as long as at least one path out of a maximum number of propagation paths from the sending means has not yet been taken into account in a new estimate of the symbol.

14.   (original): Spread spectrum digital radio communication receiver according to claim 12, comprising further means for, before carrying out the said processing means applied to the radio signal received, performing a probing that identifies, on the basis of an analysis of an impulse response of a propagation channel between the sending means and the receiver, respective delays and energies of reception for the said propagation paths.

15   (original): Spread spectrum digital radio communication receiver according to claim 14, comprising further means for ranking the propagation paths according to a descending order of their respective reception energies and in which the additional propagation path taken into account by the means for calculating the refined estimate of the symbol is the propagation path which, according to the said ranking, immediately follows the propagation paths taken into account in the calculation of the previous estimate.

16.   (original): Spread spectrum digital radio communication receiver according to claim 12, in which the radio signal is a binary modulation signal, and the parameter of reliability of the calculated estimate of a symbol is proportional to the absolute value of the said estimate.

17.   (original): Spread spectrum digital radio communication receiver according to claim 12, in which the radio signal is a quaternary modulation signal, and the parameter of reliability of the calculated estimate of a symbol is proportional to the smallest of the absolute values of the real and imaginary parts of the said estimate.

18.   (original): Spread spectrum digital radio communication receiver according to claim 12, in which the confidence criterion consists in the parameter of reliability of the calculated estimate exceeding a threshold.

19.   (original): Spread spectrum digital radio communication receiver according to claim 18, in which the said threshold depends on a service life allocated to a communication to which the radio signal received pertains.

20.   (original): Spread spectrum digital radio communication receiver according to claim 18, in which the said threshold depends on a noise level estimated over a propagation channel between the sending means and the receiver.

21.   (original): Spread spectrum digital radio communication receiver according to claim 12, in which the means for calculating the refined estimate of the symbol comprise means for adding an estimated contribution of the said additional propagation path to the estimate previously calculated for the symbol.

22.   (original): Spread spectrum digital radio communication receiver according to claim 12, in which the propagation paths taken into account by the means for calculating the estimates include paths originating from several senders belonging to the said sending means, which send radio signal components that carry identical information symbols and that are multiplexed with different spreading codes.

23.   (currently amended): A computer readable storage medium having embodied thereon a computer ~~Computer~~ program to be installed in a radio communication receiver, the program comprising instructions for implementing the following steps upon execution of the program by signal processing means of the receiver :

calculation of an estimate of at least one symbol transmitted by sending means by applying to a radio signal received a processing taking into account at least one propagation path from the sending means;

evaluation of a parameter of reliability of the calculated estimate; and when the reliability parameter evaluated does not satisfy a confidence criterion, calculation of a refined estimate of the symbol by taking into account at least one additional propagation path from the sending means in the processing applied to the radio signal received.

24.   (currently amended): The computer readable storage medium ~~Computer program~~ according to claim 23, in which the steps of evaluating the reliability parameter and of calculating a refined estimate are repeated for as long as the evaluated reliability parameter does not satisfy the confidence criterion and for as long as at least one path out of a maximum number

of propagation paths from the sending means has not yet been taken into account in a new

estimate of the symbol.

25.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 23, in which, prior to the said processing applied to the radio signal received,

a probing is performed that identifies, on the basis of an analysis of an impulse response of a

propagation channel between the sending means and the receiver, respective delays and energies

of reception for the said propagation paths.

26.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 25, in which the propagation paths are ranked according to a descending order

of their respective reception energies and in which the additional propagation path taken into

account in the calculation of the refined estimate of the symbol is the propagation path which,

according to the said ranking, immediately follows the propagation paths taken into account in

the calculation of the previous estimate.

27.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 23, in which the radio signal is a binary modulation signal, and the parameter

of reliability of the calculated estimate of a symbol is proportional to the absolute value of the

said estimate.

28.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 23, in which the radio signal is a quaternary modulation signal, and the

parameter of reliability of the calculated estimate of a symbol is proportional to the smallest of the

absolute values of the real and imaginary parts of the said estimate.

29.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 23, in which the confidence criterion consists in the parameter of reliability of

the calculated estimate exceeding a threshold.

30.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 29, in which the said threshold depends on a service life allocated to a

communication to which the radio signal received pertains.

31.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 29, in which the said threshold depends on a noise level estimated over a

propagation channel between the sending means and the receiver.

32.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 23, in which the refined estimate of the symbol is calculated by adding an

estimated contribution of the said additional propagation path to the estimate previously

calculated for the symbol.

33.   (currently amended): The computer readable storage medium~~Computer program~~

according to claim 23, in which the propagation paths taken into account in the calculations of

estimates include paths originating from several senders belonging to the said sending means,

which send radio signal components that carry identical information symbols and that are

multiplexed with different spreading codes.